LINKING ACQUISITION AND OPERATIONAL LOGISTICS

LTG Charles S. Mahan Jr.

"The Army will aggressively reduce its logistics footprint and replenishment demand."

—Objective Force White Paper

Introduction

The Army has set its sights on the future. The future is the Objective Force, and the Army is counting on significant reductions in both the logistics footprint and sustainment costs. As we design the Objective Force platforms, those reductions will be achieved when supportability is effectively balanced with cost, schedule, and performance.

In the past, the intense focus on cost, schedule, and performance often forced program managers (PMs) to "trade off" the sustainment aspects of a new system. Over time, logisticians became convinced that neither sustainment issues nor sustainment strategies were adequately represented during the "concept to fielding" process. An example of this was the procurement of the Tactical Unmanned Aerial Vehicle (TUAV). While the Army policy (reinforced by DOD Directive) calls for a single fuel on the battlefield, JP8, the TUAV uses motor gasoline to operate. This small difference results in significant planning, deploying, and supporting problems for logisticians. Regardless of the fact that heavy fuel engine "power-to-weight" output drove the decision, the second- and third-order effects of that decision were profound.

Previous failures to adequately address life-cycle costs and the sustainment strategy have resulted in significantly increased long-term costs for the Army. For that reason, the Assistant Secretary of the Army for Acquisition, Logistics and Technology signed a February 2000 memorandum that stated supportability would be co-equal to cost, schedule, and performance. While I suspect that most PMs, commanders, and logisticians feel that inadequate attention is paid to sustainment decisions made during the long procurement process, the logistics and acquisition communities share that responsibility and must work together to reduce future sustainment challenges.

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The Future Army

We believe that future conflicts will be fought over great distances with fast moving units. Units of action (UAs) will be self-sustaining and will operate independently for 5-7 days. UAs won't be able to execute "pulsed" operations unless we design reliable and sustainable equipment. Significantly improving the reliability and sustainability of our equipment not only lowers the life-cycle costs of the system and increases readiness, but also reduces the logistics footprint.

Even moderate increases in fuel efficiency can result in significant savings in force structure. To illustrate, greater fuel efficiency means fewer fuel tankers. Fewer tankers mean fewer drivers and fewer mechanics, which lead to fewer people to feed, house, and protect, thus significantly reducing the logistics footprint.

Currently, the Quartermaster and Ordnance Branches are the two largest branches in the Army. We can only reduce the size of those branches if we improve the reliability and sustainability of our equipment. Go ahead—put us out of business! We must push the technology envelope and work with industry to reduce the logistics footprint as much as we can, while ensuring no degradation to readiness and warfighting capability.

Industry Challenge

We must challenge Defense contractors and their engineers to design systems that meet tough requirements. We must set high thresholds: systems must be self-reporting, no vehicles that get less than 30 miles per gallon, no reparables, no spares, no system without embedded prognostics and diagnostics. The mean time between failure must be greater than the duration of our pulsed operations. If systems don't perform as advertised, there should be penalties. We have had extensive discussions on whether reliability should be a key performance parameter (KPP). I understand there is great resistance to this idea; however, our future warfighting concepts are dependent on reliable, sustainable systems. Reliability as a KPP would ensure that we don't procure a system that won't meet Objective Force requirements. Sustainment trade-offs are less likely to occur if supportability is weighted equally to cost, schedule, and performance during the acquisition process.

We will have to pay upfront for such "ultrareliable" systems. We'll need to ensure that we properly compensate our Defense partners for meeting our sustainability and reliability requirements. Consider the automobile industry, where the greatest profits come from aftermarket sales (in service and maintenance), not from the sale of the vehicles themselves. Given that our systems are retained in our force for 30-60 years, I believe the same model applies to the Defense industry. That is, we need to develop the proper incentives and rewards for contractors who meet our requirements.

Future Systems Sustainment

What are the sustainment characteristics of our future systems? They must be built with ultrareliable components that require minimal preventive maintenance, and when maintenance is required, repairs and services are easily and quickly performed. Future systems have no requirements for special tools or external test, measurment, and diagnostic equipment. Cargo-carrying vehicles have embedded upload/download materiel handling capability and robotic follow-on capability. This is a tall order, but I am confident we can meet these requirements if we give proper emphasis to designing such characteristics at the front end of the acquisition process.

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Conclusion

Transformation applies to everyone across the Defense establishment. We can no longer take the "business as usual" approach. We must be innovators, futuristic thinkers, and risk takers. The most critical component of combat support (CS)/combat service support (CSS) transformation is linking acquisition and operational logistics. The Chief of Staff of the Army's logistics transformation charter tasked the G-4 to achieve three initiatives: enhance strategic responsiveness, reduce the combat zone CS/CSS footprint, and reduce the cost of logistics without reducing warfighting capability or readiness. Significant reduction in the logistics footprint and costs will only occur when supportability (including the desired characteristics of reliability, maintainability, and fuel efficiency) is effectively balanced with cost, schedule, and performance.

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